

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-27. (Canceled).

28. (Previously Presented) A sprinkler head comprising a base; a nozzle assembly including first and second components supported within the base, said nozzle assembly defining an adjustable arcuate discharge orifice;

a water distribution plate having a plurality of stream receiving grooves and supported on a normally non-rotatable shaft extending upwardly from said base, and adapted to be impinged by a stream emitted from the nozzle to thereby rotate said water distribution plate relative to said shaft to thereby distribute the stream over an arc of coverage determined by said arcuate discharge orifice; and

an arc adjustment ring rotatably mounted on said base, said arc adjustment ring operatively connectable with said nozzle assembly for rotating one of said first and second components relative to the other of said first and second components for adjusting said arc of coverage.

29. (Canceled)

30. (Previously Presented) The sprinkler head of claim 28 wherein said water distribution plate is mounted for rotation about said shaft and formed with an interior chamber defined by upper and lower bearings through which said shaft extends, and an interior surface of

the water distribution plate; a stator fixed to the shaft and located within the chamber; and wherein said chamber is at least partially filled with a viscous fluid.

31. (Previously Presented) The sprinkler head of claim 28 wherein an elongated stem is supported within said base, said stem supporting said nozzle assembly, said shaft and said water distribution plate, and said sprinkler component comprises a pop-up sprinkler assembly including a fixed housing and an extendable tube, said base located on said extendable tube; and wherein said stem, nozzle assembly, shaft and water distribution plate are movable axially relative to said base from an inoperative retracted position where said water distribution plate is seated on said arc adjustment ring, to an operative extended position where said water distribution plate is axially spaced from said base.

32. (Previously Presented) The sprinkler head of claim 31 wherein said arc adjustment ring is operatively connectable with said nozzle assembly only when said water distribution plate is in said operative extended position.

33. (Previously Presented) The sprinkler head of claim 31 wherein in use, said extendable tube extends out of said fixed housing before said water distribution plate moves to said operative extended position.

34. (Previously Presented) A sprinkler head comprising:
a base;
a nozzle supported within said base;

a water distribution plate supported on one end of a shaft extending upwardly from said base and through said nozzle, said water distribution plate located in axially spaced relationship to said nozzle and adapted to be impinged by a stream emitted from the nozzle; and

a throttle control member mounted on an opposite end of said shaft such that rotation of said shaft causes said throttle control member to move relative to a flow restriction portion, to thereby adjust flow rate through said nozzle and a throw radius of the stream emitted from said nozzle.

35. (Previously Presented) The sprinkler head of claim 34 wherein an externally threaded sleeve is secured to said opposite end of said shaft and said throttle control member is threadably received on said sleeve, said throttle control member being constrained against rotation.

36. (Previously Presented) The sprinkler head of claim 34 wherein said throttle control member and said flow restriction portion are configured to always permit a predetermined minimum flow of water through said nozzle.

37. (Previously Presented) The sprinkler head of claim 36 wherein said predetermined minimum flow is sufficient to maintain rotation of said water distribution plate.

38. (Previously Presented) The sprinkler head of claim 34 wherein a distal end of said shaft projects from said water distribution plate to thereby allow a user to rotate said shaft to adjust said flow rate.

39. (Previously Presented) The sprinkler head of claim 38 wherein said distal end of said shaft is formed with a groove adapted to receive a tool for rotating said shaft.
40. (Previously Presented) The sprinkler head of claim 34 wherein said shaft is normally rotationally stationary and said water distribution plate rotates relative to said shaft.
41. (Previously Presented) The sprinkler head of claim 40 wherein said water distribution plate is formed with an interior chamber defined by upper and lower bearings through which said shaft extends, and an interior surface of the rotor plate; a stator fixed to the shaft and located within the chamber; and wherein said chamber is at least partially filled with a viscous fluid.
42. (Previously Presented) The sprinkler head of claim 34 wherein said sprinkler component comprises a pop-up sprinkler assembly including a fixed housing and an extendable tube, said base located on an upper end of said extendable tube; and wherein said nozzle, shaft and water distribution plate are movable axially relative to said base from an inoperative retracted position where said water distribution plate is seated on said base, to an operative extended position where said water distribution plate is axially spaced from said base.
43. (Previously Presented) The sprinkler head assembly of claim 42 and wherein in use, said extendable tube extends out of said fixed housing before said water distribution plate moves to said operative extended position.

44. (Previously Presented) A sprinkler head comprising:

a base;

a nozzle assembly including a discharge orifice supported within the base;

a water distribution plate supported on one end of a shaft extending upwardly from said base, said water distribution plate located in axially spaced relationship to said nozzle and adapted to be impinged by a stream emitted from the nozzle assembly;

an arc adjustment ring rotatably mounted on said base, said arc adjustment ring operatively connectable with said nozzle assembly for rotating one component of said nozzle assembly relative to another component of said nozzle assembly for adjustment of said arcuate discharge orifice; and

a throttle control member movably supported on an opposite end of said shaft such that rotation of said shaft causes said throttle control member to move relative to a flow restriction portion, to thereby adjust flow rate through said nozzle assembly and a throw radius of the stream emitted from the nozzle assembly.

45. (Previously Presented) The sprinkler head of claim 44 wherein said water distribution plate is formed with an interior chamber defined by upper and lower bearings through which said shaft extends, and an interior surface of the water distribution plate; a stator fixed to the shaft and located within the chamber; and wherein said chamber is at least partially filled with a viscous fluid.

46. (Previously Presented) The sprinkler head of claim 44 wherein an elongated stem is supported within said base, said stem supporting said nozzle assembly, said shaft and said water distribution plate, and said sprinkler component comprises a pop-up sprinkler assembly including a housing and an extendable tube, said base located on an upper end of said extendable tube; wherein said stem, nozzle assembly, shaft and water distribution plate are movable axially relative to said base from an inoperative retracted position where said water distribution plate is seated on said base, to an operative extended position where said water distribution plate is axially spaced from said base.

47. (Previously Presented) The sprinkler head of claim 46 including a first coil spring radially outward of a stream emitted from the nozzle assembly, said first coil spring having one end engaging a downstream end of said stem and an opposite end engaging said arc adjustment ring, said coil spring biasing said water distribution plate toward said inoperative retracted position.

48. (Previously Presented) The sprinkler head of claim 46 wherein said arc adjustment ring is operatively connectable with said nozzle assembly only when said water distribution plate is in said operative extended position.

49. (Previously Presented) The sprinkler head of claim 46 wherein, in use, said extendable tube extends out of said fixed housing before said rotor plate moves to said operative extended position.

50. (Previously Presented) The sprinkler head of claim 44 wherein said throttle control member and said flow restriction portion are configured to always permit a predetermined minimum flow of water through said nozzle assembly, sufficient to maintain rotation of said rotor plate.

51. (Previously Presented) The sprinkler head of claim 44 wherein a distal end of said shaft projects from said water distribution plate to thereby allow a user to rotate said shaft to adjust said flow rate and said throw radius.

52. (Previously Presented) The sprinkler head of claim 51 wherein said distal end of said shaft is formed with a groove adapted to receive a tool for rotating said shaft.

53. (Previously Presented) A sprinkler head comprising:
a base;
a nozzle assembly supported in said base and having first and second components defining an adjustable discharge orifice;
a water distributor supported on one end of a shaft extending upwardly from said base, said water distributor located in axially spaced relationship to said nozzle assembly and adapted to be impinged by a stream emitted from the nozzle assembly;
an arc adjustment member operatively connectable with said nozzle assembly for rotating said first and second components relative to each other for adjustment of said arcuate discharge orifice; and

a throttle control member movably supported by said shaft upstream of the distributor such that rotation of said shaft causes said throttle control member to move relative to a flow restriction portion, to thereby adjust flow rate through said nozzle assembly.

54. (Previously Presented) The sprinkler head of claim 53 wherein said water distributor is formed with an interior chamber defined by upper and lower bearings through which said shaft extends, and an interior surface of the water distributor; a stator fixed to the shaft and located within the chamber; and wherein said chamber is at least partially filled with a viscous fluid.

55. (Previously Presented) The sprinkler head of claim 53 wherein an elongated stem is supported within said base, said stem supporting said nozzle assembly, said shaft and said water distribution plate, and said sprinkler component comprises a pop-up sprinkler assembly including a housing and an extendable tube, said base located on an upper end of said extendable tube; wherein said stem, nozzle assembly, shaft and water distributor are movable axially relative to said base from an inoperative retracted position where said water distributor is seated on said base, to an operative extended position where said water distributor is axially spaced from said base.

56. (Previously Presented) The sprinkler head of claim 55 including a first coil spring radially outward of a stream emitted from the nozzle assembly, said first coil spring having one end engaging a downstream end of said stem and an opposite end engaging said arc adjustment member, said coil spring biasing said water distributor toward said inoperative retracted position.

57. (Previously Presented) The sprinkler head of claim 56 wherein said arc adjustment member is operatively connectable with said nozzle assembly only when said water distributor is in said operative extended position.

58. (Previously Presented) The sprinkler head of claim 56 wherein, in use, said extendable tube extends out of said fixed housing before said water distributor moves to said operative extended position.

59. (Previously Presented) The sprinkler head of claim 53 wherein said throttle control member and said flow restriction portion are configured to always permit a predetermined minimum flow of water through said nozzle assembly, sufficient to maintain rotation of said water distributor.

60. (Previously Presented) The sprinkler head of claim 53 wherein a distal end of said shaft projects from said water distributor to thereby allow a user to rotate said shaft to adjust said flow rate.

61. (Previously Presented) The sprinkler head of claim 60 wherein said distal end of said shaft is formed with a groove adapted to receive a tool for rotating said shaft.

62. (Previously Presented) The sprinkler head of claim 53 wherein said arc adjustment member comprises an arc adjustment ring rotatably mounted on said base.

63. (Previously Presented) A sprinkler head comprising a base adapted to be secured to a component supplying water under pressure; an arc adjustment member rotatably mounted on said base; a nozzle assembly having first and second components defining an adjustable nozzle orifice; a water distributor secured to a shaft extending from said base, said water distributor located downstream of said nozzle assembly wherein said nozzle assembly, said shaft and said water distributor are supported on a stem supported within said base; a drive mechanism operatively connected between said arc adjustment member and said nozzle assembly enabling relative rotation of said first and second components to thereby adjust said nozzle orifice between a pair of limit positions; said stem rotatable within said base upon over-rotation of said arc adjustment member beyond either of said pair of limit positions.

64. (Previously Presented) The sprinkler head of claim 63 wherein said drive mechanism is operable only when said stem and nozzle assembly are in an extended position relative to said base.

65. (Previously Presented) The sprinkler head of claim 63 wherein said base has an interior surface provided with a plurality of axially extending, closely spaced ribs and said stem is formed at one end thereof with a radially extending flange engaged with said closely spaced ribs.

66. (Previously Presented) The sprinkler of claim 65 wherein said radially extending flange is provided with a plurality of annularly spaced spring tabs, each tab having a radial projection adapted to engage said ribs, wherein said spring tabs serve to hold said stem against

rotation upon the application to said arc adjustment member of a normal range of torque sufficient to permit rotation of said arc adjustment member and nozzle assembly between said limit positions, but permit over-rotation of said stem and nozzle assembly relative to said base upon the application to said arc adjustment member of excessive torque.

67. (Previously Presented) A sprinkler head comprising a base;
an elongated stem supported within the base;
a nozzle and a stream deflector supported within the stem, said nozzle and stream deflector cooperating to define an arcuate orifice;
a water distribution plate supported on a shaft extending upwardly from said base, said water distribution plate located in axially spaced relationship to said nozzle and adapted to be impinged by a stream emitted from the nozzle;
a throttle control member secured to an upstream end of said shaft such that rotation of said shaft causes said throttle control member to move relative to a flow restriction portion, to thereby adjust flow rate through said nozzle and a throw radius of the stream emitted from aid nozzle, said throttle control member engageable with a seat in a maximum restriction position;
and
said throttle control member having flexible tabs extending radially therefrom for interaction with axially extending ribs on an interior surface of said stem to thereby constrain said throttle control member against rotation when said shaft is rotated and to thereby move said throttle control member axially toward or away from said maximum restriction position; said flexible tabs permitting rotation of said throttle control member with said shaft upon over-rotation of said shaft.

68. (New) A sprinkler head comprising:

a base;

a nozzle supported within said base;

a water distribution plate supported on one end of a shaft extending upwardly from said base and through said nozzle, said water distribution plate located in axially spaced relationship to said nozzle and adapted to be impinged by a stream emitted from the nozzle; and

a throttle control member mounted on said shaft upstream of said nozzle such that rotation of said shaft causes said throttle control member to move relative to a flow restriction portion, to thereby adjust flow rate through said nozzle.